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PLAN FOR CLEAN AIR

The Case for Smoke Prevention in a "Quiz" of 20 Questions and Answers

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Plan for Clean Air

1. *Is a plan really necessary?*

We know that after the war there will be many plans, perhaps a surfeit of plans. Not all will be urgent or important. But a plan for ending the evils of the polluted atmosphere of our towns is both important in itself and urgent in that unless it is adopted by the time the war ends a great deal of the post-war building will *unnecessarily* add to and help to perpetuate the consequences of the smoke from which we now suffer.

2. *How important is the problem?*

The case against smoke would fill a book. Here, in outline, are the main counts of the indictment :—

(1) Smoke, discharged into the public air by failure to burn coal correctly, is composed of particles of soot, tar, dust and grit, impregnated with the corrosive acids of sulphur. In urban and industrial districts this pollution is deposited at the rate of 200-500 tons to the square mile every year.

(2) It is directly injurious to health, both by its presence in every breath taken by the town dweller, and by reducing the strength of urban daylight, sunlight, and actinic rays up to one-half. The health of children is particularly affected. In fogs the effects of the pollution of the air are so intensified that a smoke fog is usually accompanied by a sharp increase in respiratory disorders and deaths.

(3) The ceaseless fall of smoke-dirt degrades environment, robs our towns of much of the amenity they might enjoy, and is one of the principal causes of urban squalor.

Reconstruction and town-planning measures that fail to take this factor into account can never fully achieve their goal.

(4) Smoke-dirt corrodes, soils, or destroys stonework, fabrics, metal, paint. Everywhere money and labour is diverted from productive tasks to repairing or preventing the ravages of smoke. The yearly wastage is measured in tens of millions of pounds.

(5) Plant life suffers as does human life. In many areas the beauty and solace of flowers and greenness is next to impossible or is won only by costly effort. Over wide areas far beyond the towns, agricultural land and output suffers from the drift of pollution. Again, there is loss, wastage, and continuous unproductive expenditure.

(6) Gloom, dinginess and dirt were the deplorable attributes of the era of crude technology and low social values from which we are at last emerging. But these attributes still remain, and will not disappear until the air is clean again. Less tangible but more insidious than the material effects are the effects upon the minds and values of those who live in dark and drab environments. The sense of beauty is debased, the joy and colour and light is lost, and in apathy the continued reign of Giant Squalor continues to be tolerated.

3. *Are these facts fully substantiated?*

Yes, up to the hilt. There is an extensive literature on the effects of smoke, including Government and local Government reports, researches and investigations, supported by similar work in the U.S.A. and other countries. See for example, the resume of evidence contained in *The Case Against Smoke*, published by the National Smoke Abatement Society.

4. *Why, then, has the problem not been solved before?*

Enlightened people have been trying to solve it for centuries—from the time of John Evelyn, in the reign of Charles II, to the present day. But such attempts have failed because of the overriding need to burn coal without

regard to the consequences. Moreover, the nuisance is insidious in its effects and creates the dull toleration already mentioned among those who suffer most from it. Nevertheless, although in the last fifty years much has been done to lessen the grosser forms of the nuisance, only recently has it become possible to propound a technically and economically practicable basis for the *complete* abolition of smoke.

5. *What is the basis of smoke prevention?*

Smoke is formed by the imperfect combustion of raw bituminous coal. It can be prevented *either* by burning raw coal only under such control, and in such suitable appliances that, by ensuring perfect combustion, no smoke is formed; *or* by first pre-treating the coal to give fuels that are smokeless under all conditions and utilising the smoke-producing constituents as materials (and they are valuable materials) for productive purposes. Natural smokeless coals may be regarded as finished fuels and do not require processing. Smoke prevention is one important reason for securing a better and more scientific utilisation of our coal reserves.

6. *Then there is no conflict between smoke prevention and coal?*

No, there cannot be. The smoke prevention movement in fact demands that we should become much more aware of our *responsibility* towards our precious and dwindling supplies of coal, and learn to prize them at all times, as we have had to do during the war. Smoke prevention welcomes all steps to raise the present low level of coal utilisation and is anxious for a comprehensive national fuel policy—covering production, preparation, processing and use—to be evolved and begun after the war. A plan for smoke prevention dovetails into the fuel policy required by the nation and is a link between the three major national problems of fuel, health and town-planning.

7. *What is the first step?*

The first step towards ending the smoke nuisance is to

ensure that in all new premises smokeless methods only shall be used. If this is done (and it can be done), it will mean that no new smoke is created, and the task will then resolve itself into the progressive elimination of smoke from all existing sources.

8. *How is it proposed to prevent new smoke?*

When rebuilding and industrial re-equipment starts there will in every case be a choice of installing fuel-burning plant that will result either in smoke emission or in smokeless operation. By requiring approval to be obtained from a competant authority before plant is installed it will be possible to ensure the use of plant and appliances that are most suitable for their purpose, efficient in operation, and capable of being operated without smoke production. Where smoke might still be produced if the plant were not correctly used, some subsequent supervision will also be required. This principle is used with success in other countries and in a voluntary way in at least one large city in this country, and there is no reason why it should not succeed. With plant used simply for warming, cooking, and hot water supply, as in business premises of all kinds, complete smokelessness can be ensured without difficulty, and may be insisted upon.

9. *Does this apply to domestic premises?*

Only in the case of flats or blocks of houses where heat is supplied from a central source. In individual houses it will only be necessary to give general approval to the types of appliance to be installed, including open fires and the fuels to be used in them.

10. *Smoke prevention then does not mean abolishing the open fire?*

No, because open fires can be made smokeless by the use of new types of grate and appropriate smokeless fuels. These are at least equal in every respect to old-style coal fires, and no more expensive. Indeed, after the war we may expect

far superior types of fire to be available, giving greater comfort with less fuel. People who use smokeless open fires soon learn to prefer them and to appreciate the greater cleanliness and labour-saving *inside* the home that they give.

Expert opinion says that, provided we plan and prepare for the expanding demand, there will be sufficient smokeless fuel available for all requirements.

11. *But cannot just one coal fire be retained?*

To continue with one smoke-making coal fire in each home would mean very little improvement in the condition of the atmosphere. In many towns most of the smoke is domestic (in London, for example, two-thirds of the total) and by far the greater part of this is derived from the fire in the living-room of the average house. To make cooking, hot water supply, and occasional fires in other rooms smokeless is, of course, a help, but it is the " one coal fire," burning all day and every day, that must be reformed if we are to enjoy clean air.

12. *Can the other domestic requirements be smokeless?*

Certainly. By the use of electricity and gas, and by equipment properly designed for smokeless fuels these requirements can be made entirely smokeless. Indeed, to a large extent they already are smokeless, and no difficulty need be expected in ensuring that this is attained in all post-war housing. Apart from smoke prevention there is a great opportunity to raise considerably the low and inefficient standards of domestic fuel utilisation that up to now have been a reproach to this country.

For details of the means for smoke prevention in the home see the special memorandum on the subject published by the Society.

13. *How can existing smoke be abolished?*

Various ways have been discussed, but the most practicable method appears to be by the creation of *smokeless zones*

in our towns, the areas of which could be extended by degrees until the whole town is smokeless. The initial smokeless zones are an important part of the Society's proposals for the first phases of post-war reconstruction, and their creation during the period of reconstruction will make possible the progressive abolition of smoke from the adjoining areas.

14. *What is a smokeless zone?*

An area in which *all* smoke is prohibited. The most suitable area for the first establishment of complete smokelessness will in many cases be the centre of the town or city. Here there are only or mainly business premises—shops, offices, public buildings of all kinds—all of which can be made smokeless with little difficulty. Rebuilt centres of bombed cities will of course be particularly suitable. In some cases other areas will be equally suitable, and already there are industrial estates where smoke is forbidden.

15. *Would not smokeless zones suffer from outside smoke?*

There would at once be an improvement, but outside smoke would continue to drift in to an extent dependent upon the size of the area. As the area expanded the effects of such a drift would decrease and the benefits would increase. But even the initial zone is important both for the immediate benefits it will give and as a beginning and a demonstration of what can follow.

16. *How long would it take to achieve the completely smokeless town?*

It is estimated that ten years would be a generous period, starting from the establishment of the initial smokeless zone. Over such a period it would be possible to develop the production of fuels and appliances to the extent required to supply and equip all new premises and re-equip, where necessary, existing premises. As supply permitted, the smokeless zone could be expanded, and at the end of the

ten years all of our large towns and cities would be smoke-free. This is what the Society calls its " Ten Year Plan."

17. *What about small towns and rural areas?*

One of the advantages of the smokeless zone plan is that, at first, it need be applied only to areas where the smoke problem is serious. The small country towns and villages, where smoke may not be so serious, need not be brought into the first plan. Later on, no doubt, similar or other measures for these areas could be considered.

18. *But would it be fair, or democratic, to impose regulations upon one person and not upon another simply because of where they happen to live?*

Living in towns and cities brings benefits and privileges and therefore special responsibilities. One such responsibility is not to pollute one's neighbour's air, and this is obviously more important in built-up areas. In the towns the smokeless zones would be likely to expand on an amenity basis, and those who live in districts of greater amenity cannot possibly object to having to conform a little earlier than others to steps that will safeguard those superior amenities.

19. *What about the cost? Can we afford such developments?*

If we compare the cost, direct and indirect, borne by individuals and the community as a result of the smoke evil, with the cost of abolishing that evil, there is little doubt that the change will more than pay for itself. If we add to this the benefits to the nation that will accrue from the better and more economical use of coal involved in the change—which is desirable for other important reasons—then the profitableness of smoke abolition is made still more apparent.

Capital expenditure on a large scale will be needed to give us the increased supply of smokeless fuels, the additional

gas and electricity and the modern appliances required, but such expenditure is in any case probable. *What is demanded is, in brief, that all investment in post-war years in the field of fuel and power shall be in harmony with and help to further a smokeless air policy.*

If the country is to pursue a " full employment " policy after the war, the true social cost of the investment needed for total smokelessness may be negative, since it may assist materially in avoiding the far greater cost to the community of general unemployment.

20. *As an interested member of the public, what can I do to help?*

Everyone can do much. By personal example in their homes, offices and factories, they can show that smoke prevention is completely practicable, and that it pays. They can influence local authorities, members of Parliament, the Government itself, to take up and promote an active smokeless air policy. They can influence organisations with which they are connected to do the same. Above all, they can help the National Smoke Abatement Society to develop and intensify its educational work and propaganda. The Society is far from being a wealthy body and it urgently needs more members and more funds. Everyone who is conscious of the importance of its task should assist by becoming a member of the National Society or one of its Branches. For half a guinea a year, or more if you can afford it, *you* can have the satisfaction of knowing that you are directly helping to restore pure air and cleanliness to the towns and countryside of Britain. Can you think of a better, more positive cause to support than this?

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